DOCUMENT RESUME

ED 357 460 EA 024 880

AUTHOR	Valerio, Fernando
TITLE	Fiscal Shock, Wage Compression, and Structural Reform: Mexican Adjustment and Educational Policy in the 1980s. Special Subseries: Fiscal Policy and the Poor. Innocenti Occasional Papers Economic Policy Series, Number 17.
INSTITUTION	United Nations Children's Fund, Florence (Italy).
REPORT NO	ISSN-1014-7837
PUB DATE	Jun 91
NOTE	59p.
PUB TYPE	Reports - Research/Technical (143)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Adult Education; *Economic Impact; Educational Assessment; *Educational Change; *Educational Development; *Educational Finance; Elementary Secondary Education; Financial Problems; Foreign Countries; Higher Education
IDENTIFIERS	*Mexico

ABSTRACT

In 1981, at the end of a long period of economoic growth in the Mexican economy, the national education system had grown considerably to where one out of three citizens was enrolled in school. Student enrollment for 1981-82 was 22.7 million, almost double enrollment for 1970. Close to 90 percent of those students were in primary and secondary education. During the period 1970-81, secondary school enrollment grew at an annual rate of 10.6 percent. Secondary education was available to 86.6 percent of children graduating from primary school. However, schools still experienced high rates of failure and desertion. Advances were also made in higher education, in fighting adult illiteracy, and in helping those who had not finished primary or secondary education. However, from 1982 to 1988, Mexico experienced increased social and economic polarization due to a financial crisis. Consequently, educational advances lost momentum. In some areas of postprimary education, program coverage declined. There was a lack of educational models to meet new demands, and economic hardship on the poorest sectors of society increased. Adult illiteracy also increased, and educational disparities between states continued. Authorities' efforts to counteract the effects of the economic crisis on education were inadequate and lacked national and international support. (Contains 39 references.) (JPT)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED357460

unicef

INTERNATIONAL CHILD DEVELOPMENT CENTRE

FISCAL SHOCK, WAGE COMPRESSION & STRUCTURAL REFORM: MEXICAN ADJUSTMENT & EDUCATIONAL POLICY IN THE 1980s

by

Fernando Valerio

Innocenti Occasional Papers

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY

James R Himes

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

EA 024 880

Spedale degli Innocenti
Florence, Italy

BEST COPY AVAILABLE

INNOCENTI OCCASIONAL PAPERS
ECONOMIC POLICY SERIES, NUMBER 17

SPECIAL SUBSERIES
FISCAL POLICY AND THE POOR

FISCAL SHOCK, WAGE COMPRESSION & STRUCTURAL REFORM: MEXICAN ADJUSTMENT & EDUCATIONAL POLICY IN THE 1980s

by
Fernando Valerio

June 1991

This paper is part of the background documentation for a study on "Fiscal Policy and the Poor", edited by Giovanni Andrea Cornia and forthcoming in 1992.

Fernando Valerio is with the Ministry of Public Education, Mexico.

The views expressed in this paper are those of the author and do not necessarily represent the views of UNICEF, the UNICEF International Child Development Centre, or any sponsoring organization.

The author wishes to thank the UNICEF International Child Development Centre, particularly Giovanni Andrea Cornia, Beth Ebel and Debrah Veroni for the editing and preparation of the text.

CONTENTS

I.	MEXICO'S EDUCATION SECTOR PRIOR TO THE CRISIS	1
	Access to Education in 1981	1
	Preschool Education in Mexico	2
	Primary Education	3
	Secondary Education	7
	Adult Education	8
	Higher Learning	10
	Qualitative Aspects	12
	Sources of Financing	14
	Structure of Education Expenditure	18
II.	MEXICO'S EDUCATION SECTOR DURING THE 1982-88 FINANCIAL CRISIS	20
	Organizational Changes in the Education Sector	21
	Changes in Education Services Provided	22
	Initial Education	22
	Preschool Education	23
	Primary Education	24
	Secondary Education	27
	Adult Education	29
	High School Education	31
	University and Post-graduate Education	32
	Changes in Qualitative Aspects	34
	Changes in the Level and Sources of Financing	36
	Changes in the Structure of Expenditure	39
III.	CONCLUSIONS	43

TABLES

1.	Enrolment in the National Education System, 1970-82	1
2.	Structure of the National Education System, 1981-82	2
3.	Primary School Enrolment, 1970-81	4
4.	Terminal Efficiency in Primary School, 1975-82	5
5.	School Drop-out and Failure Rates for Primary School, 1980-81	6
6.	Structure of Demand for Secondary Education	7
7.	Rates of Failure and Desertion in Secondary School, 1981	8
8.	Illiteracy Rates by State, 1980 and 1981	9
9.	Adults Lacking Basic Reading Skills, Primary and Secondary Education, 1981	10
10.	Enrolment in Higher Education, 1970 and 1981	11
11.	Expenditure in Education per capita and as Share of Gross Domestic Product	15
12.	National Expenditure on Education, 1970-81	16
13.	Total Federal Expenditure and the Education Sector, 1970-81	17
14.	Ministry of Public Education: Expenditure by Level and Type of Education, 1980 and 1981	18
15.	Ministry of Public Education: Cost per Student by Level and Type of Education, 1980 and 1981	19
16.	Ministry of Education: Structure of Budgetary Expenditure, 1970-81	20

17.	Mexico's National Education System: Total Population Served by Formal and Informal Education Programmes, 1982-88	22
18.	Preschool Enrolment and Programme Coverage, 1981-88	24
19.	Primary School Enrolment, 1981-89	25
20.	Primary School Enrolment and Coverage, 1981-88	26
21.	Secondary School Enrolment, 1981-82 and 1988-89	28
22.	Secondary School Enrolment, Absorption and Terminal Efficiency, 1981-88	29
23.	Adult Education: Primary, Secondary and Literacy Programmes	31
24.	Selected Indicators for Mexico's High School Education Programme, 1981-88	32
25.	Enrolment in University Programmes	33
26.	Selected Indicators for Total Public Expenditure, 1981-88	37
27.	Expenditure on Education by Source and as Share of Gross Domestic Product, 1981-88	38
28.	Structure of Expenditure by Education Sector, 1981-88	39
29.	Selected Monthly Salaries in the Education Sector in Mexico City, 1982 and 1988	40
30.	Ministry of Public Education's Budgeted Expenditure by Level of Education, 1981-88	41
31.	Expenditure per Student by Level of Education, 1981-88	42

I. MEXICO'S EDUCATION SECTOR PRIOR TO THE CRISIS

Access to Education in 1981

In 1981, the Mexican economy was nearing the end of a period of sustained economic growth. The abrupt end to growth was due to various factors which were both internal and external in nature. Throughout the 1970s, the national education system also experienced considerable expansion, so that by 1981-82 one out of every three inhabitants was enrolled in the national education system (Table 1).

The total number of students enrolled in the national education system during the 1981-82 school year was 22.7 million, almost double total enrolment for 1970. This represented an annual rate of growth in service coverage of 6.3 percent, slightly more than twice Mexico's rate of population growth for the same period.

Thanks to significant efforts to expand education coverage in Mexico, the average number of years of schooling of the population increased from 4.2 to 5.6 years. Although a sizeable increase given the country's large and growing population, enrolment still fell short of the desired level. Progress is still needed to reduce the still significant rate of school failure, high indices of adult illiteracy, and the large number of adults lacking primary and/or secondary schooling.

During 1970-82, the share of students enrolled in federally-controlled schools increased, while the share of those enrolled in state-run or private education institutions declined. During the 1981-82 school year, only 10.4 percent of all students were enrolled in private education institutions. This contrasts sharply with the monopoly which private schools had held on education in Mexico during more than half of the nineteenth century.

TABLE 1: ENROLMENT IN THE NATIONAL EDUCATION SYSTEM, 1970-82

	1970-71	%	1975-76	%	1981-82	%
Federal schools	7,105,100	61.6	9,649,574	62.4	14,693,050	64.8
State or autonomous schools	3,124,966	27.1	4,209,880	27.2	5,615,168	24.8
Private schools	1,307,066	11.3	1,608,549	10.4	2,365,155	10.4
Total	11,537,132	100.0	15,468,002	100.0	22,673,373	100.0

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

In 1981, the structure of enrolment in Mexico's education system could be depicted as a pyramid, with a very broad base and a very narrow vertex, since preschool, primary and secondary schooling absorbed close to 90 percent of the total number of students in the country (Table 2).

TABLE 2: STRUCTURE OF THE NATIONAL EDUCATION SYSTEM, 1981-82

Level	No. Schools	Teachers	Students	%
Preschool	17,367	42,374	1,376,248	6.1
Primary	76,291	399,189	14,981,156	66.0
Vocational	2,618	19,399	395,192	1.7
Secondary	11,888	185,039	3,348,802	14.8
High school technical	853	16,926	220,800	1.0
Preparatory	2,059	66,232	1,142,895	5.0
Teachers' basic	493	13,016	201,157	0.9
Teachers' advanced	64	5,391	131,523	0.6
University	874	69,553	875,600	3.9
Total	112,507	817,119	22,673,373	100.0

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

Preschool Education in Mexico

In 1970, only 11 percent of children between four and five years of age had access to preschool education. Starting in 1979-80, education authorities placed greater emphasis on providing preschool education to the population.

In 1979-81, the implementation of the National Plan for Education established specific goals to be met by the education sector, and preschool education was conferred priority treatment. During the first three years of this plan, the number of children enrolled in preschool grew at an annual rate of 27 percent, raising the total number of children enrolled in preschool to 1.4 million by 1981-82, almost twice the number enrolled in 1979-80.

As a result of the new emphasis on preschool education, the share of children four and five years of age enrolled in preschool rose from 18.8 to 31.4 percent.

In 1982, almost 90 percent of children attending preschool were enrolled in public schools (federal and state-controlled schools). The remainder were enrolled in private schools. At that time, coverage of preschool education services in isolated rural and Indian populations was extremely low. This was

due largely to the fact that preschool teachers in Mexico are predominantly women and tend to be reluctant to move their place of residence to isolated rural zones in order to teach these populations.

Notable disparities exist between the 31 states of the Mexican Republic and the Federal District (Mexico City) in terms of preschool coverage. For example, while 73 percent of all preschool-age children living in Baja California Sur are enrolled in preschool, only 20 percent of preschool-age children in the state of Mexico have access to this level of schooling, and some 11 other states have coverage rates below the national average, which for the 1981-82 school year was 31.4 percent.

Despite considerable progress during 1979-81, by the end of the period, 78 percent of the preschool-age population was still excluded from this type of schooling.

Primary Education

Primary education forms the base of the education sector's pyramidal structure. Three types of primary education are currently offered in Mexico. The first type is the regular or general form of primary education, offering the full six-year programme. Federal, state and private primary schools offer this programme in urban, suburban and many rural areas.

The second type of primary education is offered only in rural areas and is an alternative to the regular programme. Classes are given by community instructors who are young graduates from secondary school and who have received special training for carrying out this task.

The third type of primary education is a programme designed to meet the special basic education needs of Mexico's 56 Indian groups. In this bilingual/bicultural programme, Spanish is taught as a second language and special emphasis is given to re-affirming these children's cultural and ethnic values and traditions.

One of the Mexican education authorities' chief objectives has been to expand primary school coverage to the entire school-age population. In 1981, the total number of students enrolled in primary education was close to 15 million, 95 percent of whom were enrolled in federal or state-run schools and the remaining 5 percent in private schools (Table 3), giving a total coverage for primary education of 92.5 percent of children between six and fourteen years of age.

TABLE 3: PRIMARY SCHOOL ENROLMENT, 1970-81

	1970 Enrolment	%	1975 Enrolment	%	1981 Enrolment	%
Population 6-14 years of age	12,731,264		15,245,579		18,406,265	
Total enrolment primary school	9,248,190	100.0	11,461,415	100.0	14,981,156	100.0
of which:						
Federal	6,073,924	65.7	7,870,072	68.7	10,755,238	71.8
General	5,957,870	64.4	7,575,242	66.1	10,175,703	67.9
Indian	116,054	1.3	228,673	2.0	384,849	2.6
Community	--	--	66,157	0.6	194,686	1.3
State	2,452,553	26.5	2,975,358	26.0	3,465,618	23.1
Private	721,713	7.8	615,985	5.4	760,300	5.1
Population 12-14, primary completed	1,076,557		1,449,188		2,376,191	
Unmet demand	2,406,517		2,334,976		1,048,918	
Coverage, primary school (%)	81.1		84.7		94.3	

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

This objective of seeking to provide universal access to primary education was afforded increased importance starting in 1978 with the implementation of the "Primary School for All" Programme.

However, in spite of increased emphasis and the numerous education options that were instituted as part of this programme, at the end of the 1981-82 school year more than 1 million children were still deprived of access to primary schooling.

Another important objective has been to substantially increase the share of children finishing the full six years of the primary school programme. At the end of 1975-76, only 40.5 percent of children starting first grade actually finished the entire six-year programme. Six years later the terminal efficiency was raised to 50.4 percent, an increase of almost 10 percentage points (Table 4).

However, in 1981-82, this indicator was still far too low. Almost half of all children entering first grade were not finishing the entire primary education programme in the normal six-year period. Moreover, it was estimated that over 25 percent of all children entering first grade never finished primary school at all, at least not in the formal primary system.

TABLE 4: TERMINAL EFFICIENCY IN PRIMARY SCHOOL a/, 1975-82	
School Year	Terminal Efficiency (%)
1975-1976	40.5
1976-1977	42.6
1977-1978	44.0
1978-1979	46.1
1979-1980	48.1
1980-1981	49.7
1981-1982	50.4

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

a/ Terminal efficiency is the percentage of children entering first grade who finish the full six-year programme of primary education within the six-year period.

The national figure for terminal efficiency in Mexico masks a high degree of variance from state to state. In Chiapas, Yucatán and Michoacán, the figures for terminal efficiency were 25.4, 34.5 and 36.1 percent, respectively, while in Nuevo León, Mexico City and Baja California, this figure was 69.9, 69.3 and 68.2 percent, respectively. Further disparities arise when comparing figures for urban populations with those located in isolated rural areas - populated predominantly by Indian groups - where the figure for terminal efficiency drops as low as 10 percent.

Low terminal efficiency rates are due to the confluence of two factors: high rates of school desertion and high rates of failure for one or more years of schooling. School failure and desertion are due, in turn, to several factors related to structural dysfunctions in the economy, as well as to problems confronted by the schools themselves, such as: a lack of adequate teaching materials; a rigid, inappropriate education system; ineffective methodologies for involving parents in the education process; and deficiencies in primary school teacher training programmes.

As may be observed in Table 5, rates of failure and desertion were still quite high in 1980-81. Over 1.6 million primary students failed that year and an additional 1 million dropped out of school completely.

Table 5 indicates that many children encounter obstacles in their social development during the first three years of primary school. 75.7 percent of the children who failed and 72.9 percent of those dropping out had been enrolled in the first three grades of primary school. The fact that a child fails and/or leaves primary school before completing the first three years

automatically influences his or her possibilities for aspiring to upward mobility. This is the experience of a considerable number of children who are members of the most vulnerable social groups, such as those living in marginal urban or isolated rural zones and those from Indian communities.

These children come from families with very precarious economic situations often subject to the effects of unemployment or underemployment. Children suffer from malnutrition and poor diets, and they often live in unhealthy and unsafe environments. These children, when they do attend school, often receive the poorest quality of education. Their teachers are often the least qualified, and they lack adequate didactic materials. School facilities are often inadequate. The above factors help explain the difference between the national average for terminal efficiency in 1981-82 (50.4%), and the figure for Indian children, which was 20 percent.

By the end of 1981-82, there were 76,000 primary schools in Mexico, 38 percent of which either did not offer the entire six-year programme or had only one teacher for all grades, or both. The latter group of schools were those which were most often located in isolated rural communities, where a majority of the population tends to be of Indian descent. Given these schools' grave deficiencies, children living in these isolated rural areas were deprived of education opportunities comparable in quality to those provided to children living in urban areas. In this manner, Mexico's constitutional principle which confers every Mexican child access to quality primary education had not yet been satisfactorily fulfilled.

TABLE 5: SCHOOL DROP-OUT AND FAILURE RATES FOR PRIMARY SCHOOL, 1980-81

Grades	Failures	%	Drop-outs	%
First grade	623,562	38.1	410,018	40.7
Second grade	343,071	21.0	170,693	16.9
Third grade	270,857	16.6	154,049	15.3
Fourth grade	210,860	12.9	118,262	11.7
Fifth grade	150,460	9.2	125,815	12.5
Sixth grade	35,786	2.2	28,443	2.8
Total	1,634,596	100.0	1,007,280	100.0

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

Secondary Education

Secondary education in Mexico is offered as an extension of primary education. It is offered to children from 12 to 15 years of age and is designed to continue the child's education in an integral fashion.

During the 1981-82 school year, 3,348,802 children were enrolled in secondary schools. Of these, approximately 70 percent were enrolled in federally-controlled schools and the remainder in state-run or private schools.

During the period 1970-81, secondary school enrolment grew at an annual rate of 10.6 percent. By 1981-82, the Mexican education system was able to provide secondary education to 86.6 percent of children graduating from primary school, the highest enrolment ever attained for this level of education (Table 6).

This significant increase in coverage was dampened by the very low rate of terminal efficiency reported for secondary education, which was even lower than that of primary education. While the overall rates of failure and desertion in primary school were 11.1 and 6.9 percent, respectively, the rates reported for secondary school were 28.2 and 9.6 percent for the 1981-82 school year. Similar to the pattern for primary school, the highest rates of failure and desertion occur during the first two years of secondary school, as may be observed in Table 7. During the 1981-82 school year, the failure and desertion rates for the first and second years of secondary education taken together were 78.3 and 74.2 percent, respectively.

The fastest growing high school programmes were technical and terminal technical schools, enrolling 21 and 16 percent of all high school students by 1981.

TABLE 6: STRUCTURE OF DEMAND FOR SECONDARY EDUCATION

	1975	1976	1981
Primary school graduates	1,077,332	1,146,099	1,555,622
Enrolment, secondary school	786,415	852,119	1,350,622
Unmet demand, secondary school	290,917	293,980	205,300
Coverage, secondary school (%)	73.0	74.3	86.8

Source: Ministry of Education, General Office for Planning, Programming and Budgetary Control.

Adult Education

Mexico's adult education programme is designed to address the needs of individuals over 15 years of age who are illiterate or who have not finished their primary or secondary education (Table 7). Adult education programmes are also offered for those seeking some form of formal or informal vocational training, and other programmes offering continued education courses. One of the chief aims of these programmes is to improve the quality of the participants' family and social life and enhance their qualifications for better employment opportunities.

The National Adult Education Law, enacted in 1975, creates the adult education programme as part of the country's national education system. Adult education in Mexico is a programme carried out in addition to formal education programmes and is based on the use of self-teaching and social mobilization techniques. In 1978, under the theme "Education for All," the promotion of adult education was given greater emphasis. In 1981, the National Literacy Programme (PRONALF) was implemented, benefiting 700,000 adults during its first 15 months in operation. The National Institute for Adult Education was later created and took on the tasks being carried out by PRONALF. Thanks to efforts carried out by these two programmes, the adult illiteracy rate, which in 1980 had been estimated at 17 percent, was cut to 15.8 percent just one year later (1981) (Table 8).

In addition to the formidable challenge of teaching over 6 million adults to read, most of whom reside in extremely isolated rural areas of the country, the national education system was also faced with the task of providing some 14 million adults with primary education and 9 million with secondary education (Table 9).

TABLE 7: RATES OF FAILURE AND DESERTION IN SECONDARY SCHOOL, 1981

	Failures	%	Desertions	%
First year	326,520	41.0	126,623	43.8
Second year	330,535	37.3	88,024	30.4
Third year	192,270	21.7	74,581	25.8
Total	885,325	100.0	289,228	100.0

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

TABLE 8: ILLITERACY RATES BY STATE, 1980 AND 1981

	1980		1981	
	Illiterate Population	% a/	Illiterate Population	% a/
Mexican Republic	6,451,740	17.0	6,391,047	16.8
Aguascalientes	30,790	10.9	30,519	10.0
Baja California	46,178	6.6	44,016	5.9
Baja California Sur	9,191	7.5	9,132	6.8
Campeche	40,071	17.0	40,650	15.9
Coahuila	70,059	7.9	67,996	7.2
Colima	24,955	12.9	24,321	11.7
Chiapas	428,604	38.0	452,132	36.5
Chihuahua	102,971	8.9	98,925	8.1
Distrito Federal	326,809	5.9	315,773	5.1
Durango	59,712	9.5	57,376	8.7
Guanajuato	392,761	24.0	376,018	21.3
Guerrero	408,268	35.6	407,768	33.9
Hidalgo	255,014	30.0	246,724	27.7
Jalisco	322,549	13.3	313,745	12.3
Mexico	569,298	13.6	573,167	12.2
Michoacán	396,644	25.2	385,902	23.5
Morelos	91,447	16.9	89,145	15.3
Nayarit	64,999	16.5	63,199	15.3
Nuevo León	106,287	7.5	105,441	6.6
Oaxaca	478,500	36.0	474,701	34.6
Puebla	495,095	26.8	494,059	25.5
Querétaro	103,125	26.1	102,257	24.1
Quintana Roo	20,780	16.9	21,288	14.2
San Luis Potosí	198,263	21.6	193,338	20.1
Sinaloa	141,313	13.9	137,871	12.7
Sonora	74,822	8.5	72,533	7.8
Tabasco	102,841	18.0	102,431	16.8
Tamaulipas	108,669	9.7	106,259	9.0
Tlaxcala	51,355	16.8	49,509	15.3
Veracruz	721,552	23.4	729,939	22.2
Yucatán	121,160	19.0	119,282	17.1
Zacatecas	87,658	14.9	85,633	14.1

Source: Información Regular, de la Dirección General de Planeación, Programación y Presupuesto. Secretaría de Educación Pública, SEP.

a/ Percentage of illiterate inhabitants in total population over 15 years of age.

TABLE 9: ADULTS LACKING BASIC READING SKILLS, PRIMARY AND SECONDARY EDUCATION, 1981

	Number of Adults a/	Percent b/
Illiterate adults	6,391,000	16.8
Lacking primary schooling	14,088,000	36.5
Lacking secondary schooling	9,998,000	24.6

Source: National Institute for Adult Education.

a/ Estimates.
b/ Percent of the total population of individuals over 15 years of age who are unable to read, or who have not completed their primary or secondary schooling.

During the 1981-82 school year, 710,000 adults studied primary and secondary school programmes which were offered in different forms. However, of these students, only a small percentage actually finished the entire programme of study. Some 380,198 adults were enrolled in specially-designed training programmes which addressed adults' daily needs and interests and related the course content with productive activities. This number of students is insignificant, considering that in 1981 a total of almost 31 million adults lacked basic reading skills, or their primary or secondary education. The end result was an increase in the number of adults lacking their full primary or secondary training, as the number of youth lacking these levels of education and becoming adults was greater than those finishing the adult education programme.

Higher Learning

Starting in the 1940s, Mexico experienced accelerated urban migration spurred by processes of industrial development, the concentration of services, the high demographic growth rate, and the emergence of a sizeable middle class. As a result, demand for higher education grew explosively, giving rise to acute imbalances between demand for higher education and the supply of services.

In 1970, total enrolment in institutions of higher learning in Mexico was 252,000 students: i.e., one out of every 20 youth from 20-24 years of age. Enrolment was concentrated in very few institutions. The Federal District (Mexico City) and the states of Jalisco, Nuevo León and Puebla served 75.9

percent of students enrolled in universities or other centres of higher learning in Mexico, and 53.8 percent of these students were enrolled in institutions located in the Federal District.

Important flows of students migrating from their home states to others in order to study university programmes gave rise to situations such as that of Mexico's National Autonomous University (UNAM). Enrolment in this institution alone accounted for 23.8 percent of the country's entire university student population and enrolment in the National Polytechnical Institute was equivalent to another 13 percent.

By 1981, Mexico's system for higher learning had changed dramatically from the situation prevailing in 1970. A national system for higher learning had been developed, which included sub-systems in the areas of professional degree programmes, technological education and teacher's training.

Total enrolment in professional degree programmes (licenciaturas) was 875,600 in 1981, representing a 12 percent annual rate of growth for the period 1970-81. By 1981, one in every ten youths between 20 and 24 years of age was studying some form of higher education (Table 10).

Thanks to the implementation of policies requiring planning and a more rational use of resources, both at the national level as well as by the individual institutions conforming the national system of higher learning, the grave imbalances in service supply were remedied to a considerable degree. An example of this process is the fact that in 1981, the student population residing in the Federal District represented 31.3 percent of the nation's entire university student population, a figure which is 22.5 percentage points below its 1970 level. Considerable concentration, however, was reported for the more traditional university programmes.

TABLE 10: ENROLMENT IN HIGHER EDUCATION, 1970 AND 1981

	1970	1981	Annual Growth a/
Federally controlled	51,132	120,152	8.1
State controlled	28,864	139,281	15.4
Private schools	35,160	129,976	12.6
Autonomous schools	137,053	486,191	12.2
Total enrolment	252,209	875,600	12.0

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

a/ Annual average rate of growth.

Qualitative Aspects

The Mexican Government has a long history of expanding coverage of its education system. However, the quality of education provided has often suffered at the expense of this expansion.

The quality of education being offered is difficult to measure, as there is no set definition of what constitutes quality service, nor is there sufficient comparable information available. The idea of quality education, however, is an intuitive question and may be associated with the education system's capacity to stimulate the harmonious development of potential skills and capabilities, the development of a logical mental framework, the capacity to think critically and to learn autonomously, as well as the development of a healthy sense of national and cultural identity, and esteem for democratic forms of social organization.

The degree of development of an education system is also related to the system's capacity to respond to society's needs within a context of constant flux and change. In this last respect, the quality of education provided is associated with its capacity to achieve the pedagogical ideal defined in the Mexican Constitution.

During the first half of the 1970s, Mexico's education authorities placed an increased emphasis on improving the quality of education in addition to merely expanding coverage.

This intention was materialized in 1971 with the implementation by the Federal Government of the Education Reform programme. This programme's chief objective was to achieve an integral, democratic and harmonious education programme which did not neglect the importance of teaching students the value of social awareness and solidarity.

As part of this programme, primary education curricula were reformulated by noted specialists in the field of education. New organisations were also created, such as the Centre for the Study of Advanced Educational Media and Procedures, and the National Council for Educational Promotion.

The first organisation was created with a view toward stimulating informal forms of educational activities and the development od new educational methodologies based on the use of the mass communications media. The latter was created to seek alternative sources of financial assistance for educational activities and to support educational activities in rural areas.

New formal educational programmes were also implemented. In 1973, the Colegio de Bachilleres was created to broaden the spectrum of alternative forms of high school education and improve the quality of the programme being offered. This new high school programme attempted to offer a course of study in accordance with a clearly-defined conceptual framework to meet a specific set of educational objectives.

New higher learning institutions were created, such as the Autonomous Metropolitan University (Universidad Autónoma Metropolitana, UAM), an alternative to the traditional Latin American University.

This objective of improving the quality of education was furthered by the implementation of the National Education Plan, 1979-82. The Plan established a set of strategies and goals, including that of "improving the quality of education." This objective became ubiquitous for programmes and projects formulated by the education sector.

The teacher constitutes the key element for ensuring the improvement in the quality of education. As part of the above-cited Plan, the National Consultative Council on Teachers' Education was created to offer well-designed, quality training courses for teachers. Moreover, the Council on Curricular Contents and Teaching Methodologies was also formed to stimulate the development of new educational methods to meet the changing needs of society.

Another institution which was created at this time is the National College for Professional Technical Education (CONALEP), designed to train mid-level technicians. One of the chief objectives was to provide training to students in accordance with the specific and immediate needs of Mexican industry. Another chief function of this programme was the design and production of didactic materials to be used in the training courses being offered.

In spite of the efforts being carried out by the Ministry of Education, a major part of the country's system for training teachers remained antiquated, rigid and disjoined from the rest of the higher education system in Mexico. Teachers trained in the new programmes were few in number and were generally incapable of taking the vanguard in responding to the country's educational needs. The National Pedagogical University, created as an experiment in advanced teachers' training, was unable to keep apace of demands in this area by 1981.

Teaching methods remained virtually unchanged throughout Mexico's education system and antiquated teaching methodologies prevailed, except in a few instances of limited coverage where experimental methodologies were applied. Nevertheless, one objective was achieved, which was the creation of a general awareness throughout the education sector of the need to improve the quality of education.

Sources of Financing

Mexico's national education system is financed from five principal sources: federal budgetary allocations, contributions from the social sector, private resources, international financing institutions, and domestic and foreign credit sources.

Public expenditure is allocated to education both directly and indirectly. Direct public financing is allocated to federal, state and municipal education systems. Indirect public expenditure is allocated in the form of subsidies which the federal government confers to state governments; state-run enterprises having to do with educational activities; centres for scientific, technological and humanistic research and development; public, state and autonomous universities (these institutions are financed predominantly through this channel); as well as some privately-owned educational institutions. Indirect public financing is also channeled through scholarships and grants, incentives for scientific and cultural activities, national professional prizes and similar activities.

In 1981, total public expenditure on education totaled $50,856 million pesos (expressed in constant 1970 pesos), equivalent to 5.3 percent of Mexico's GDP. This is the highest expenditure in education ever recorded. For the period 1970-81, public expenditure in education grew at an annual real rate of 13.0 percent, superior to the rate of growth observed in enrolment during the same period (6.3%). Also, real GDP per capita in Mexico grew at an annual rate of 4 percent (Table 11).

Table 12 shows the evolution of the structure of public expenditure in education from 1970 through 1981. As may be observed in this table, the share of federal expenditure increased by 6 percentage points during the period under consideration (1970-81), while the share of state and municipal expenditure decreased and private expenditure in education registered the

greatest decline, a drop of 11 percentage points to represent a mere 5.8 percent of total expenditure.

In 1970, total federal expenditure, including central government spending as well as the budgets of state-run enterprises and decentralized organisations, totaled $109,238 million pesos. Of this total, 7.5 percent was channeled to the education system. In subsequent years, education's share in total federal expenditure fluctuated, registering a maximum share of 10.6 percent in 1977.

In 1981, 9 percent of total federal expenditure was allocated to education. By this time, however, the country's public sector deficit had become a serious problem. Service payments on the public sector deficit were equivalent to 23.4 percent of total federal expenditure, causing cutbacks in other areas of expenditure, including education (Table 13).

TABLE 11: EXPENDITURE IN EDUCATION PER CAPITA AND AS SHARE OF GROSS DOMESTIC PRODUCT

	1970	1975	1981	Annual Growth 1970-81
Total spending in education b/ (millions of constant 1970 pesos)	12,640	26,167	50,856	13.5
Gross Domestic Product (mn. constant 1970 pesos)	444,271	610,122	956,247	7.2
Edn. as share of GDP (%)	2.8	4.3	5.3	--
Per capita spending in edn. (constant 1970 pesos)	247.0	433.1	712.4	10.1
Memo Items				
Total population a/	51,176,104	60,420,499	71,368,339	3.1
GDP per capita (constant 1970 pesos)	8,681.2	10,097.9	13,394.9	4.0

Source: Información Regular, de la Dirección General de Planeación, Programación y Presupuesto. Secretaría de Educación Pública, SEP.

a/ Estimates cited by the National Population Council (CONAPO), Mexico.
b/ Includes actual expenditure in education by Ministry of Education, other Ministries, state and municipal governments, and private sector, as well as transfer payments from Ministry of Planning to state governments.

TABLE 12: NATIONAL EXPENDITURE ON EDUCATION, 1970-81
(Millions of nominal pesos)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
National Total a/	12,640	15,050	18,652	23,427	32,968	47,179	64,371	93,522	121,861	165,791	219,326	325,887
(%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Federal Govt.	8,232	10,065	12,738	16,681	23,225	34,946	48,984	71,284	92,577	125,406	166,485	255,699
Min. of Education:												
Authorized	8,372	10,076	12,284	15,827	21,485	32,510	43,777	62,733	80,390	105,603	140,799	224,681
Actual	7,817	9,445	11,760	15,140	20,795	31,115	42,496	61,761	77,562	102,955	139,971	220,466
(%)	61.8	62.8	63.0	64.6	63.1	66.0	66.0	66.0	64.0	62.3	63.8	67.7
Other Ministries	415	620	978	1,541	2,430	3,831	6,488	9,523	15,015	22,451	26,514	35,233
(%)	3.3	4.1	5.3	6.6	7.4	8.0	10.1	10.1	12.3	13.4	12.1	10.8
State Govts. a/	2,095	2,518	3,189	3,817	5,811	7,396	9,038	13,569	18,676	26,133	34,839	47,587
(%)	16.5	16.7	17.1	16.3	17.6	15.6	14.1	14.6	15.2	15.7	15.9	14.6
Municipal Govts.a/	173	217	275	329	432	637	849	1,169	1,609	2,252	3,002	4,101
(%)	1.4	1.4	1.5	1.4	1.3	1.4	1.3	1.2	1.3	1.3	1.2	1.1
Private spend. a/	2,140	2,250	2,450	2,600	3,500	4,200	5,500	7,500	9,000	12,000	15,000	18,500
(%)	16.9	15.0	13.1	11.1	10.6	9.0	8.5	8.1	7.2	7.3	7.0	5.8

Sources: de la Madrid, Miguel, *Primero y Cuarto Informes de Gobierno*, Presidencia de la República. Ministry of Programming and the Budget (SPP), *Cuenta de la Hacienda Pública Federal*. Ministry of Public Education, General Office for Planning, Programming & Budgetary Control, *Oficios de los gobiernos de los estados*; *Estimación del gasto educativo municipal y particular*.

a/ Figures refer to actual spending.

TABLE 13: TOTAL FEDERAL EXPENDITURE AND THE EDUCATION SECTOR, 1970-81
(Billions of nominal pesos)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Total Fed. Expend. a/	109.2	121.3	148.8	204.0	276.5	400.7	483.8	672.0	914.8	1,213.3	1,839.0	2,837.6
(%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Education b/	8.2	10.0	12.8	16.7	23.2	35.0	49.0	71.3	92.6	125.4	166.5	255.7
(%)	7.5	8.3	8.6	8.2	8.4	8.7	10.1	10.6	10.1	10.3	9.1	9.0
Other sectors	82.6	91.1	118.3	158.1	221.0	320.9	382.5	429.5	562.2	776.0	1,288.1	1,918.9
(%)	75.6	75.0	79.5	77.5	79.9	80.1	79.1	63.9	61.5	64.0	66.8	67.6
Service payments c/ public sector deficit	18.4	20.2	17.7	29.2	32.3	44.8	52.3	171.2	260.0	311.9	444.4	663.0
(%)	16.9	16.7	11.9	14.3	11.7	11.2	10.8	25.5	28.4	25.7	24.1	23.4

Source: Información Regular, de la Dirección General de Planeación, Programación y Presupuesto. Secretaría de Educación Pública, SEP.

a/ Includes state-run enterprises.
b/ Includes all other sectors.
c/ For 1970-1976 figures, includes amortization payments and balances due on previous fiscal periods (ADEFAS), and from 1977-1981, includes interest payments, commissions and expenditures, and amortization payments (ADEFAS).

Structure of Education Expenditure

Upon examining the structure of the Ministry of Education's expenditure (Table 14), one may observe a real increase of 25 percent in the Ministry's total spending in 1981, as compared to the 1980 level. In 1981, increases were observed across the board for all levels of education not because of a shift in government priorities, but a 25 percent increase in total government expenditure. A sizeable increase was observed for special education, which received a 182 percent increase in funding. Initial education also received increased resources (133%), as well as formal preschool education (66%).

Thanks to the real increase observed in federal allocations to the education sector as a whole, cost per student increased in almost all levels and types of education during the two years under consideration. The only area which observed a substantial decline in cost per student was professional secondary education, due to an increase in enrolment over and above the increase in resource allocation (Table 15).

TABLE 14: MINISTRY OF PUBLIC EDUCATION: EXPENDITURE BY LEVEL AND TYPE OF EDUCATION, 1980 AND 1981
(Millions of constant 1980 pesos)

	1980	1981	% Change
Initial education	189	440	132.8
Special education	331	933	181.9
Preschool education	4,208	6,997	66.3
Primary education	43,039	50,590	38.5
General secondary education	12,838	16,632	29.5
Technical secondary educ.	10,438	12,902	23.6
Professional secondary	1,053	1,234	17.2
General high school	7,755	9,409	21.3
Technical high school	7,529	10,413	38.3
Teachers' training	3,525	3,590	1.8
Advanced technological educ. a/	8,571	9,860	15.0
University education a/	18,987	21,458	13.0
Indian bicultural education	4,228	4,486	6.1
Vocational training	1,227	1,262	2.8
Adult education b/	2,721	2,798	2.8
Culture and sports activities	5,846	6,780	16.0
Research in education and production of didactic materials	1,696	1,848	9.0
Others c/	5,790	4,340	25.0
Total	139,971	174,972	25.0

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.
a/ Includes post-graduate programmes.
b/ Includes literacy and basic education programmes.
c/ Includes special education programmes.

TABLE 15: MINISTRY OF PUBLIC EDUCATION: COST PER STUDENT BY LEVEL AND TYPE OF EDUCATION, 1980 AND 1981
(In constant 1980 pesos)

	Cost per Student 1980	1981	% Change
Initial education	3,098	5,151	66.2
Special education	5,262	9,052	72.0
Preschool education	6,913	8,328	20.5
Primary education	4,251	5,746	35.2
General secondary a/	8,634	10,163	17.7
Technical secondary	19,123	20,323	6.3
Professional secondary	32,427	10,930	-66.3
General high school b/	13,612	16,744	23.0
Technical high school	33,235	36,595	10.1
Teachers' training c/	49,637	52,859	6.5
Advanced technological d/	77,093	82,063	6.4
University education d/	31,987	34,307	7.2
Indian bicultural e/	9,199	8,741	-5.0
Vocational training	26,516	26,021	-1.9

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

a/ Includes general secondary education, tele-secondary education and secondary education programmes for adults.
b/ Includes expenditure allocated to federal, state and autonomous institutions.
c/ Includes basic teachers' training programme and university degree in teaching programme.
d/ Includes post-graduate students.
e/ Includes preschool, primary and secondary programmes.

In 1981, there were marked variations in cost per student from one level or type of education to another. Those levels of education registering the highest levels of cost per student were in the area of secondary and advanced technical education and teachers' training. The level of expenditure per pupil in these areas was almost five times greater than the level reported for general high school education, eight times higher than for general secondary education and fourteen times greater than cost per student in primary education.

The explosive growth of the primary school age population in Mexico during the decade of the 1970s obliged education authorities to concentrate resources in current spending. Investment in installations was seriously neglected during this period and educational programmes were often provided in improvised installations.

Investment spending was severely restricted during the decade of the 1970s (Table 16). In 1970, investment represented 18.7 percent of total expenditure of the education sector. By 1981, this figure was a mere 7 percent.

The backlog in the construction of installations accumulated over a considerable length of time. In 1976, it was estimated that a ten-year lag in construction existed with regard to the number of students enrolled in the national education system.

Moreover, although current expenditure absorbed an increasing share of total spending for the sector, teachers' salaries did not increase accordingly. Quite to the contrary, teachers' salaries at many levels actually declined in real terms, as did minimum wages in the economy as a whole. The growth in recurrent expenditure, therefore, was almost exclusively used to expand the education system.

TABLE 16: MINISTRY OF EDUCATION: STRUCTURE OF BUDGETARY EXPENDITURE, 1970-81
(Millions of nominal pesos)

	1970	%	1975	%	1980	%	1981	%
Current expenditure	6,355	81.3	27,385	88.0	129,797	92.7	205,122	93.0
Investment	1,462	18.7	3,730	12.0	10,174	7.3	15,344	7.0
Total	7,817	100.0	31,115	100.0	139,971	100.0	220,466	100.0

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

II. MEXICO'S EDUCATION SECTOR DURING THE 1982-88 FINANCIAL CRISIS

Mexico experienced increased economic and social polarization during recent years of crisis (1982-88). The situation of the majority of the population worsened considerably, while the rich strengthened their position. The financial crisis that had been brewing over the course of several years finally erupted with violent force in 1982, wreaking havoc on the internal and external economic situation of the country.

Mexican authorities responded by applying an economic adjustment programme as part of the country's 1982-88 National Development Plan. This

programme attempted to restore balance to the economy through the implementation of two basic strategies. The first sought to check inflation and restore stability in the peso-dollar exchange rate while stimulating economic growth and employment. The second sought to restructure the Mexican economy, a task which implied profound changes in economic relationships. The latter strategy was aimed at overcoming basic deficiencies and imbalances inherent to the country's economic structure, with a view toward promoting balanced, sustainable economic development to ensure a more equitable social system. However, the reality of the situation was that the economic adjustment programme carried with it high social costs, the repercussions of which were felt almost immediately.

One of the most significant adverse effects of the economic adjustment programme was a notable decline (by 40% from 1981-88) in the purchasing power of minimum wages. Added to this was the elimination of subsidized prices for basic products and services and the effects of decreased public expenditure. The fall in public expenditure, in turn, was translated into a reduction in social services, especially for underprivileged groups of society and those living in extreme poverty.

Economic adjustment policies seriously limited development in virtually every area of the education sector, and in several cases caused regressions with regard to the situation prior to the crisis. Mexican authorities made some attempt to ensure the continuance of educational programmes for some groups living in areas of extreme poverty, despite limited resources for the sector as a whole.

Organizational Changes in the Education Sector

As part of the government's overall policy of economic adjustment and austerity, Mexican authorities in the education sector implemented measures designed to reduce the bureaucratic apparatus of the Ministry of Education and to rationalize resource utilization. The Ministry of Education eliminated the offices of one entire Deputy Ministry, several General Offices, Councils and associated branches. The overall structure and functions of the Ministry, however, were left unchanged, and in reality the resources liberated by the above-mentioned structural changes were insignificant when compared to the total amount of resources administered by the sector. In analyzing these modifications today, they seem to have been responses to the demands of

certain social groups who at that time were quite outspoken about what they considered the wastefulness and excessive size of the federal bureaucracy.

Changes in Education Services Provided

As a result of the general reduction in public expenditure, the education sector was forced to cut spending in several areas. The impact was exacerbated by the dramatic increase in total enrolment during the same period. While public expenditure in education (by federal and state governments) dropped 35 percent in real terms between 1982-88, school enrolment grew by 1.8 million. Approximately 91 percent of these students were enrolled in the public education system.

During the 1988-89 school year, 25.4 million students were enrolled in the formal education programme. These students were taught by 1 million instructors in 154,000 schools throughout the country. Of this total, 65.4 percent of the students were enrolled in federally-run institutions, 25.2 percent in state-run institutions and 9.4 percent in private schools. Enrolment in informal education programmes increased in relative importance by over 6 percentage points during this period (Table 17).

TABLE 17: MEXICO'S NATIONAL EDUCATION SYSTEM: TOTAL POPULATION SERVED BY FORMAL AND INFORMAL EDUCATION PROGRAMMES, 1982-88
(Thousands of students enrolled)

	1982	1983	1984	1985	1986	1987	1988
Formal programmes a/	23,683	24,455	24,756	25,254	25,437	25,444	25,448
Informal programmes	1,886	2,501	2,931	3,602	3,912	3,670	4,036
Total	25,569	25,956	27,687	28,856	29,349	29,114	29,484

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

a/ Figures correspond to students entering programmes at the beginning of each school year (September).

Initial Education

The National Education System provided limited coverage in the area of education for children under three years of age. Though school enrolment in initial education grew at an annual rate of 5 percent, by 1988 only 4 percent

of the country's population under three years of age had access to this form of education.

It is precisely by offering widespread access to initial education that the Mexican education authorities could effectively promote the integral development of children under three years of age, regardless of their economic or social background. Initial education programmes also provide education authorities with an entry point for ensuring that each child has adequate nutrition, providing basic curative and preventive health care, and for stimulating the healthy development of the child's physical, intellectual and psycho-social capacities.

During the period under consideration, enrolment in the formal initial education programme grew at an annual average rate of 2.4 percent, while enrolment in the informal initial education programme increased by 6.3 percent per year. In the informal initial education programme, parents of children in isolated communities are trained to carry out a series of educational activities with their children in their homes. This programme has been found to provide children with the basic knowledge and skills they need to better benefit from formal schooling later on and contributes to healthy intellectual, physical and psycho-social development. At the same time informal programmes can be run at lower cost than formal programmes requiring greater expenditure in installations, teachers' salaries and materials.

Preschool Education

Preschool education was one of the few areas which did not suffer serious budget cutbacks during the country's economic crisis, receiving, instead, considerable support.

Enrolment in preschool education during the 1981-82 school year totaled 1,376,248 students, providing access to 24.3 percent of the total four-year-old population, and 38.4 percent of the nation's five-year-old population (Table 18). During that year, 90 percent of the total population of preschool students attended federal or state-run schools.

By 1988-89, 2.7 million children were enrolled in preschool programmes, representing an increase in coverage to 56.1 percent of the total four-year-old population and to 71.1 percent of the five-year-old population. The increase in preschool enrolment reflected an annual average rate of growth of 9.9 percent. Although this growth rate may be considered significant, it is

lower than the rate reported for enrolment in this programme during the period 1977-81, which was 20 percent per year.

These national averages, however, mask the existence of severe disparities in programme coverage from region to region. Ten states currently have preschool coverage well below the national average. These states' preschool programmes are also deficient in terms of the quality and effectiveness of education provided.

TABLE 18: PRESCHOOL ENROLMENT AND PROGRAMME COVERAGE, 1981-88

	1981	1982	1983	1984	1985	1986	1987	1988
Total enrolment a/ (thousands)	1,376	1,691	1,894	2,148	2,381	2,547	2,626	2,669
4-year-olds	516	666	760	891	1,003	1,105	1,151	1,147
5-year-olds	821	984	1,087	1,206	1,324	1,387	1,416	1,460
Prgm. coverage (%)	31	39	44	51	56	60	62	64
4-year-olds	24	32	37	43	48	53	56	56
5-year-olds	38	47	52	58	64	66	68	71

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

a/ Includes students of other ages.

Primary Education

During the 1988-89 school year, 14.7 million students were enrolled in primary school institutions across the country (Table 19). This represented a 2.2 percent decline (324,799 students less) compared to total primary school enrolment during the school year 1981-82, although programme coverage continued to rise. This decline may be largely attributable to the reduction in the rate of population growth registered during the period under study, and the high desertion rates of children living in isolated rural and marginal urban zones of the country. These factors explain the 2.2 percent reduction in primary school enrolment over the period 1983-88.

It is important to note that enrolment in the bilingual/bicultural primary programme for Indian children continued to grow at an average annual rate of 5.1 percent. This was not the case, however, with the programmes designed to enlist the participation of members of isolated rural communities in the direct implementation of primary school programmes. Enrolment in this type of programme declined at an average annual rate of 11.5 percent. This

significant drop has been attributed to problems of ensuring the effective cooperation of local governments.

It may be affirmed that in regard to primary education, the national education system has been successful in guaranteeing access to virtually all primary school age children in the country. However, these children's permanence in primary school throughout the entire six-year basic education programme has not been assured, thus failing to guarantee all children a minimum level of basic education, one of the State's constitutional obligations. The rate of terminal efficiency for Mexico's primary education programme improved by almost 8 percentage points during the period 1976-81 and by only 4.9 percentage points over the period 1981-88. It remains low, with only 55.3 percent of the children entering primary school finishing the entire primary programme.

Among the most important factors determining the country's high desertion rates have been the large share of the population living in poverty conditions; the large share of the population living in isolated rural or marginal urban areas, and in some 123,000 communities with populations of less than 2,500 inhabitants; the prevalence of significant migratory flows from rural areas to the cities in search of better sources of employment; and the poorer groups' negligible participation in production and consumption.

The already precarious situation was exacerbated by the economic crisis and the subsequent implementation of economic adjustment programmes, which forced many children to abandon their studies and seek some form of employment in order to contribute to the family income.

TABLE 19: PRIMARY SCHOOL ENROLMENT, 1981-89

	1981-82		1988-89	
	Enrolment	%	Enrolment	%
Federal schools	10,755,238	71.8	10,550,058	72.0
General	10,175,703	68.0	9,920,082	67.7
Indian	384,849	2.6	547,020	3.7
Community	194,686	1.2	82,956	0.6
State schools	3,465,618	23.1	3,271,602	22.3
Private schools	760,300	5.1	834,697	5.7
National total	14,981,156	100.0	14,656,357	100.0

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

From the information presented in Table 20, one may observe that during the period 1981-88, the indices of primary school desertion and failure for urban children improved somewhat, though not at the rate reported prior to the crisis. There were no such improvements for rural children. On the contrary, school desertion in children living in rural zones increased by 2.8 percentage points during the period 1981-88, and during the most severe phase of the economic crisis (1982-85), primary school desertion in rural zones increased by 4.5 percentage points.

TABLE 20: PRIMARY SCHOOL ENROLMENT AND COVERAGE, 1981-88

	1981	1982	1983	1984	1985	1986	1987	1988
Total enrolment (thousands)	14,981	15,223	15,376	15,219	15,124	14,995	14,768	14,656
Gross enrolment rate (%) a/	92.5	93.5	94.3	93.8	98.3	97.1	97.1	98.4
Terminal efficiency (%)	50.4	52.1	50.3	51.4	52.1	53.8	54.8	55.3
Failure rate (%):								
Urban	8.7	8.8	8.4	8.7	8.5	8.3	8.1	8.0
Rural	14.0	14.1	14.3	13.7	14.1	14.3	14.3	14.1
Desertion rate (%):								
Urban	4.2	4.6	3.7	2.3	2.1	3.5	3.0	2.6
Rural	7.2	7.7	10.6	10.5	12.2	9.9	10.0	10.0

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

a/ Enrolment in primary school as percentage of total population between 6 and 14 years of age.

School drop-outs might have been even more widespread had Mexican education authorities not implemented measures specifically designed to counteract this tendency. Examples of such remedial and compensatory measures include the project designed to reinforce basic reading and writing skills, implemented as of 1984, and a later programme designed to reinforce mathematics skills, identified as one of the principal problem areas determining school failures and desertion.

Other programmes which were initiated or sustained during these critical years and which are designed to impede further deterioration in the rate of primary school desertion include the programme for reinforcing skills of children identified as having learning problems; the programme which offers incentives to teachers living in isolated rural areas (designed to motivate

rural teachers to remain in their communities); and the programme granting over 100,000 scholarships to the children of rural and urban workers. These programmes were unable, however, to prevent the desertion each year of some 700,000 primary school students.

National figures for terminal efficiency in primary education mask wide disparities between the states and regions of the country. During the period 1988-89, terminal efficiency for primary schools in the Federal District (Mexico City) averaged 80.3 percent of children enrolled, while Chiapas registered a rate of 27.1 percent. In addition to the Federal District, five other states reported rates of terminal efficiency above 70 percent and 14 states registered rates below the national average. Although a slight improvement was observed in this indicator over the period in consideration, acute interregional disparities were not mitigated.

Since the 1981-82 school term, some 7,500 schools which formerly had only one teacher for the entire primary programme have been converted to two- or three-teacher schools. Moreover, 13,000 schools which previously had not offered the entire six-year primary programme are now offering the complete programme. However, these efforts were not successful in remedying the situation of a still significant number of schools with only one teacher for the entire six-year programme or those not offering the complete primary course. By 1988, 22 percent of the nation's primary schools still had only one teacher and 20 percent did not offer the complete six-year programme. The great majority of these incomplete primary schools are located in isolated rural areas of the country, where most inhabitants are of Indian descent. The children living in these areas, therefore, are not provided with educational services which are equal in quality to those provided to inhabitants of other regions, which constitutes a further obstacle to these children's social and intellectual development.

Secondary Education

Enrolment in Mexico's secondary school programme grew at an average annual rate of 3.8 percent, far below the rate of 10.6 percent reported during the 1970s. As part of the education sector's response to the national economic crisis, greater emphasis was placed on expanding the coverage of technical secondary and tele-secondary programmes. Annual enrolment in technical secondary programmes under federal control averaged 12 percent, while

federally run tele-secondary programmes grew at 7.2 percent annually during the period under consideration. State education systems placed even greater importance on these programmes, reporting average annual rates of growth in enrolment of 21.5 percent and 21.0 percent, respectively. Enrolment in private secondary school programmes, on the other hand, declined at an annual rate of 5.6 percent, perhaps due to the dramatic increases reported in tuition fees.

Federal education authorities continue to control the vast majority of secondary schools in the country. While in 1981 federally-controlled schools represented 67.8 percent of the total, by 1988 this share had grown to 70.4 percent. State and autonomous secondary schools also increased their relative share, while the share of private secondary schools declined (Table 21).

Terminal efficiency for secondary education in general did not change dramatically during the period under consideration. The percentage of students finishing primary school and continuing on to the first year of secondary school did drop, however, from 86.8 percent in 1981-82 to 83.2 percent in 1988-89 (Table 22). This was largely due to the fact that the programme designed to expand primary education coverage to isolated rural and Indian populations was creating new demands for secondary education services in these areas which are particularly difficult to serve. Added to this phenomenon were the effects of the economic crisis, which caused many poor students graduating from primary school to refrain from entering secondary school in order to seek some form of employment.

TABLE 21: SECONDARY SCHOOL ENROLMENT, 1981-82 AND 1988-89

	1981-82		1988-89	
	No. Students	%	No. Students	%
Federal control	2,271,342	67.8	3,067,628	70.5
General programme	1,542,645	46.0	1,824,388	41.9
Tele-secondary prgm.	93,863	2.8	207,296	4.7
Technical secondary prgm.	634,834	19.0	1,035,944	23.8
State/autonomous control	556,131	16.6	940,173	21.6
General programme	480,243	14.4	645,464	14.8
Tele-secondary prgm.	61,550	1.8	240,303	4.4
Technical secondary prgm.	14,338	0.4	54,406	1.3
Private secondary schools	521,329	15.6	347,533	7.9
Total enrolment	3,348,802	100.0	4,355,334	100.0

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

TABLE 22: SECONDARY SCHOOL ENROLMENT, ABSORPTION AND TERMINAL EFFICIENCY, 1981-88

	1981	1982	1983	1984	1985	1986	1987	1988
Total enrolment (thousands)	3,349	3,583	3,842	3,969	4,180	4,295	4,347	4,355
Programme absorption % a/	86.8	86.2	85.4	82.9	84.3	83.7	83.0	83.2
School desertion %	9.6	10.3	8.9	9.8	7.9	9.3	9.1	9.1
Failure of term %	28.2	25.7	26.9	28.2	28.1	27.2	26.4	26.4
Terminal efficiency %	50.4	52.1	50.3	51.4	52.1	53.8	54.8	55.3

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

a/ Share of students graduating from primary school who enroll in first year of secondary school.

In general, it may be affirmed that universal access to secondary schooling is provided to students living in urban areas. However, secondary school coverage in rural areas has not been able to completely meet demand.

Adult Education

One of the greatest challenges faced by the national education system has been the task of providing all Mexicans with basic reading and writing skills. During the period under consideration, significant efforts were made to reduce the number of illiterate persons to under 6 million, a number which had remained unchanged for many years, despite several previous programmes aimed at achieving its reduction.

Success in reducing the number of illiterate adults in Mexico was finally achieved through the implementation of several literacy programmes, and especially through the efforts carried out by the National Institute for Adult Education (INEA). By 1988, the number of illiterate adults was reduced to approximately 4 million, representing a reduction from 15.8 percent of the population in 1981 to 8.1 percent in 1988 (Table 23).

Teaching the remaining 4 million illiterate adults to read, however, still represents a significant challenge, especially in light of the fact that

the great majority of these individuals live in some 123,000 isolated communities with populations under 2,500 inhabitants. More than 70 percent of the country's illiterate adults are concentrated in ten states, with the largest populations being located in Oaxaca (28.3% of the total number), Guerrero (20.6%), Puebla (17.6%) and Veracruz (13.4%). Another problem is posed by the fact that literacy programmes are currently being implemented among only 14 of the country's 56 ethnic groups.

Although favourable results were obtained with the literacy programmes implemented in the 1980s, the same cannot be said of programmes aimed at providing adults with basic education, that is, the complete primary or secondary school programmes.

In fact, the number of adults lacking complete primary education grew (1981-88) from 14.4 million to 20.5 million individuals, representing an annual rate of growth of 5.2 percent. Although 3.3 million adults enrolled in primary education programmes, only a very small share of adult students were able to complete the programme and receive their primary school certificates (Table 23). Among the possible explanations for this apparent failure of programmes designed to increase basic education levels among adults is that programme completion requires participating adults to invest more time than they have at their disposal, given their employment and family commitments, which tend to increase even further during times of economic crisis.

Part of the increase in the number of adults lacking basic education was due to the inclusion in this group of formerly illiterate adults who had successfully completed their basic reading and writing courses and who were then included among the group of adults requiring primary education. Another factor was the growing number of children in rural areas dropping out of primary school and who, upon reaching 15 years of age, became included among the group of undereducated adults.

Results of the programme aimed at breaching the gap in adult secondary education levels were similarly disappointing. While in 1981 there were approximately 9.1 million adults lacking complete secondary education, in 1988 this group numbered over 16 million, an 80 percent increase, representing an annual average increase of 8.7 percent. As was the case with adult primary education programmes, a very small percentage of those enrolling in secondary programmes during the period under consideration actually finished the entire course of study and received their secondary certificate.

TABLE 23: ADULT EDUCATION: PRIMARY, SECONDARY AND LITERACY PROGRAMMES

	1981	1982	1983	1984	1985	1986	1987	1988
Adult Literacy								
Adults enrolled	535,448	481,133	511,658	687,216	747,906	1,002,609	845,023	664,969
Illiteracy rate (%)	15.8	14.7	13.6	12.4	11.2	10.0	8.9	8.1
Adult Primary Edn.								
Adults enrolled	--	515,155	605,906	556,846	559,260	538,819	639,051	841,610
Adults receiving primary cert. a/	6,204	4,362	13,300	18,447	21,439	28,989	34,723	51,811
Share of adults lacking complete primary edn. (%)	35.8	37.0	37.3	37.6	38.2	39.1	39.4	39.7
Adult Secondary Edn.								
Adults enrolled	--	187,381	216,052	200,173	194,718	189,879	205,204	228,522
Adults receiving primary cert. a/	10,771	6,926	13,049	17,823	17,330	23,550	28,960	27,838
Share of adults lacking complete primary edn. (%)	22.7	26.2	27.7	28.6	29.6	30.0	30.8	31.5
Population > 15 yrs. of age (thousands)	40,263	41,730	43,257	44,849	46,506	48,200	49,952	51,738

Source: National Institute for Adult Education.

a/ Figures refer only to primary certificates awarded by the National Institute for Adult Education (INEA).

In 1988, Mexico's adult population was estimated at 51.7 million. Of this total, 4.2 million individuals, i.e., 8.1 percent of the adult population, were considered illiterate, 39.7 percent had not completed primary school and another 31.5 percent had not completed secondary school. Over the period under consideration (1981-88), 13 million adults joined the ranks of those lacking either primary or secondary school or both, giving a total of almost 37 million individuals lacking these levels of basic education, or 71 percent of the total adult population.

High School Education

From 1981-88, total enrolment in high school education grew at an annual average rate of 6.1 percent, increasing in absolute terms from 1.4 to 2.1 million students. However, the share of those graduating from secondary school who went on to enroll in the first year of high school declined by 10 percentage points during the same period. The trend may be largely explained

by the effects of the economic crisis on family incomes, obligating many secondary school graduates to seek some form of employment in order to bolster family income. Another factor may be the lack of an adequate programme offering higher education to small isolated communities which for the first time were producing secondary school graduates but which lacked high school facilities close by.

The indicator for terminal efficiency in technical high schools also dropped dramatically (by 14 percentage points) in the 1980s (Table 24). Terminal efficiency for the preparatory school programme (bachillerato) also declined, but to a lesser degree. The drop in terminal efficiency may also be explained by the entry of a significant share of high school students into the work force, and by the fact that many students seeking entry into the college preparatory programme enter technical programmes while they await admission to some preparatory school.

TABLE 24: SELECTED INDICATORS FOR MEXICO'S HIGH SCHOOL EDUCATION PROGRAMME, 1981-88
(University preparatory and technical training schools)

	1981	1982	1983	1984	1985	1986	1987	1988
Preparatory schools a/	1,143	1,234	1,311	1,428	1,538	1,527	1,586	1,643
Technical schools	221	301	317	317	359	409	426	428
Total enrolment (thousands)	1,364	1,535	1,628	1,745	1,897	1,936	2,012	2,071
Absorption ratio (%) b/	86.7	86.2	83.0	81.5	80.8	78.3	77.2	76.4
Terminal efficiency (%)								
Preparatory schools	61.7	62.7	62.8	57.8	61.8	56.1	56.5	57.1
Technical schools	49.9	64.1	40.3	37.4	40.4	44.4	40.2	35.9

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

a/ Includes university preparatory and terminal high school programmes (bachillerato).
b/ Share of secondary graduates who enroll in the first year of high school.

University and Post-graduate Education

Enrolment in university and post-graduate programmes grew at an annual average rate of 3.7 percent from 1981-88, considerably lower than the rate of 12.0 percent reported during the 1970s.

By 1988-89, 1,130,000 students were enrolled in centres of higher learning in Mexico, including universities and technological institutes. Approximately 96 percent of these students were enrolled in undergraduate degree programmes.

Growth in university enrolment was particularly pronounced in federally-controlled universities, whose relative participation in university education increased, while state and autonomous universities experienced a decline in their relative participation (Table 25). Private universities' relative share in total university enrolment grew during this period. These institutions predominantly serve the nation's wealthier classes.

TABLE 25: ENROLMENT IN UNIVERSITY PROGRAMMES
(Undergraduate and post-graduate programmes)

	1981-82		1988-89	
	Enrolment	%	Enrolment	%
Federally-run universities	120,152	13.7	168,624	14.9
State/autonomous universities	625,472	71.4	780,258	69.0
Private universities	129,976	14.8	181,384	16.0
Total enrolment	875,600	100.0	1,130,266	100.0

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

The share of students graduating from high school who went on to enroll in university programmes dropped drastically, declining by 4,695 students in 1984-85 for the first year of undergraduate study. This decline in the number of students continuing their studies after high school may be largely explained by the financial crisis.

In addition, the country's public institutions for higher learning were hard hit by the effects of budgetary cutbacks and restraints on the part of the Mexican Government in response to the economic crisis. Programmes and projects were cut or severely reduced, equipment acquisition restrained and library purchasing programmes severely limited.

In conclusion, while it may be affirmed that during the period 1981-88, despite drastic budget cuts, total enrolment in Mexico's education system (including formal and informal programmes) grew at an annual average rate of 1.7 percent, increasing total enrolment by 3.9 million students, the rate of

absorption for secondary, high school and university levels declined. Growth in enrolment in private education institutions also declined at an annual average rate of 0.2 percent. This decline was also especially pronounced for the areas of vocational training (-1.2%) and secondary education (-5.6%).

Changes in Qualitative Aspects

During the period under consideration, Mexico's education authorities conferred priority to the task of improving the quality of education being imparted to the nation's children. In response to this objective, in 1984, an undergraduate university degree programme was created in the field of education. In 1985, high school programmes specializing in teachers' training were created and became required training for all individuals interested in becoming teachers in the national education system. The first generation of university-trained preschool and primary school teachers has recently graduated and been incorporated into the teachers' corps, thus marking the commencement of a new era in the development of Mexico's education sector.

Although its contribution is still marginal, Mexico's National Teachers' University (Universidad Pedagógica Nacional, UPN) has begun to provide access for already employed teachers to programmes designed to aid them in obtaining a university degree in specialized areas of education: preschool, primary, secondary and adult education, and in the field of bilingual-bicultural education of Indian populations, special education and physical education.

Training has been provided to directors of preschool, primary and secondary schools, as well as of high schools and technological institutes, in the legal aspects of the Mexican education system, the use of technical-administrative tools, and the development of leadership abilities required for enlisting community support in improving the quality, relevance and coverage of educational programmes.

It is also worth noting that the use of computers as educational tools in secondary and high school programmes has begun, although still at an incipient level. Some 5,000 computers have been installed and are used as instruments for didactic support. These computer systems were designed by Mexican technicians for this specific purpose.

Significant efforts have begun to reformulate programmes of study at all levels of education in Mexico. School textbooks have been prepared in 37 of

the 56 Indian dialects spoken by Indian groups forming part of the Mexican population.

Other efforts have been made to incorporate a greater cultural content in existing school textbooks and curricula for primary levels of study, and to formulate programmes designed to employ the media in the dissemination of cultural concepts and programmes.

The above are a few of the actions that have been recently implemented by Mexican education authorities to improve the quality of the national education system. These actions are meritorious, to be sure, but are far from sufficient to guarantee quality for Mexico's education system, or ensure competitiveness and advancement in line with the revolution of knowledge taking place at the global level.

Research and development in the field of education suffered cutbacks during recent years in Mexico as a result of the economic crisis. Indeed, the promotion of research and innovation in this field did not enjoy strong support prior to the crisis, as was also the case for the development of new institutional models in the area of education.

In 1982, Mexican authorities defined the objectives and strategies to govern secondary and high school education in Mexico, and an attempt was made to coordinate and prioritize the great diversity of plans and programmes existing at this level of education. Despite these efforts, high school education in Mexico still lacks a formal institutional-legal basis and remains an offshoot of university education. This situation has historical roots as the university preparatory school was created as an integral part of the Mexican university system.

It is undeniable that Mexican education authorities and institutions of higher learning have made significant efforts to improve the quality of education services being provided, as well as to rationalize the growth and development. Nevertheless, one important area of action - research - has not received the support and attention it deserves, but has remained a marginal activity nationwide. In 1984, only a few institutions allocated over 6 percent of their budget to research. In addition to the chronic problem of over-concentration of research activities within a very limited number of Mexican education institutions, there is the grave lack of congruence between research activities and the country's specific development needs.

Demands on the part of Mexican society for a widespread decentralization of Governmental authority and actions have been loudly voiced in recent years.

As a result, decentralization was one of the principal strategies embodied in the current administration's National Development Plan. However, decentralization has not been achieved in the area of basic education and teachers' training; to the contrary, these areas have been further centralized.

Cultural development has long been considered a national priority in Mexico and progress has been made in promoting cultural development nationwide. As part of official cultural policy, efforts were made to decentralize activities carried out in this area of intervention. In 1985, Mexican authorities launched the National Borders Programme (Programa Nacional de las Fronteras), which is being implemented in areas adjacent to the country's northern and southern borders. This programme's chief aim has been to consolidate and promote cultural development in these specific areas of the country and to reinforce residents' sense of national identity.

Another important cultural development programme has been instrumental in increasing the number of public libraries in the country from 351 to 2,500, and the number of museums from 50 to over 100. However, the number of books per capita, calculated on the basis of the total collection of the nation's entire network of libraries, remains far below figures reported for developed countries.

The National Youth Services Council (Consejo Nacional de Recursos para la Atención de la Juventud, CREA) provided youth throughout Mexico with vocational and legal guidance as well as recreational, cultural and touristic services. The Council experienced a dramatic reduction in financial resources, which has adversely affected the quality and coverage of services offered in the area of cultural development and has obliged the complete elimination of sports-oriented programmes.

Changes in the Level and Sources of Financing

In 1981 and 1982, total expenditure on education (public and private) was equivalent to 5.3 percent of Mexico's GDP, the highest rate recorded to date.

In 1982, Mexico's debt service payments increased by almost 15 percentage points as compared to the previous year (Table 26). In order to compensate for the increase in debt payments, Government authorities were obliged to cut back public spending in practically every other area of

TABLE 26: SELECTED INDICATORS FOR TOTAL PUBLIC EXPENDITURE, 1981-88
(Billions of nominal pesos)

	1981	1982	1983	1984	1985	1986	1987	1988
Total public expenditure a/	2,837	5,260	9,102	14,402	21,687	43,281	110,279	222,975
Budget composition								
Education (%) b/	9.0	7.9	6.1	6.4	6.8	5.5	5.0	5.0
Public debt (%) c/	23.4	38.3	39.1	36.7	37.7	49.8	55.5	58.2
Other sectors (%)	67.6	53.8	54.8	56.9	55.5	44.7	39.5	36.8

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

a/ Includes expenditure by state-run enterprises.
b/ Includes other Ministries.
c/ Includes 1970-1976, amortization and outstanding debt payments for previous fiscal years (ADEFAS).

expenditure. In 1982, public expenditure in education was not yet severely affected. But in 1983, public education expenditure was cut 31.3 percent over 1982, and the share of education in GDP dropped to 3.8 percent (Table 27).

In 1984 and 1985 there was an attempt to restore government spending in education to its former share of total public expenditure. However, by 1988, public expenditure in education had fallen to 5 percent of total public expenditure, slightly more than half its 1981 share of 9 percent. Public debt service payments had increased to almost 60 percent of total public expenditure, crowding out expenditure in other sectors. The decline in public expenditure in areas other than debt servicing drastically restricted the possibilities for promoting economic and social development.

In analyzing the structure of total expenditure in education, one may observe the almost continuous expansion - with a few irregularities - of federal participation in education from 78.5 percent of total expenditure in 1981 to 80 percent in 1988. State participation in total expenditure in education, on the other hand, dropped 4 percentage points over the same period, calling attention to a lack of sufficient co-responsibility between the state and federal governments in this area of intervention.

Municipal spending in education in 1988 was equivalent to less than one-half of this item's 1981 share. Private expenditure in education grew from 5.8 percent of total expenditure in education in 1981 to 9 percent in 1988, thanks to the sizeable increases registered in enrolment in private high school and

university programmes, as well as these institutions' continuous process of tuition and fee increases.

TABLE 27: EXPENDITURE ON EDUCATION BY SOURCE AND AS SHARE OF GROSS DOMESTIC PRODUCT, 1981-88
(x 10^3 pesos)

	1981	1982	1983	1984	1985	1986	1987	1988
Expenditure on education/GDP (%)	5.3	5.3	3.8	4.2	4.0	3.9	3.6	3.5
Fed.Govt.Spending:								
Ministry Pub.Edn.								
Authorized expend.	225	379	523	863	1,137	1,551	2,687	7,968
Disbursed b/	221	367	489	827	1,332	2,112	5,034	10,120
%	67.7	71.5	72.4	66.4	69.4	67.4	71.4	73.1
Other Ministries	35.2	46.8	64.4	101.5	148.5	271.3	484.8	957.0
%	10.8	9.1	9.5	8.1	7.7	8.7	6.9	6.9
State Expend. a/	48	68	83	197	278	429	810	1,461
%	14.6	13.2	12.3	15.9	14.5	13.7	11.5	10.6
Municipal Exp. a/	4.1	5.8	7.1	8.7	11.3	17.3	35.2	51.5
%	1.1	1.1	1.0	0.7	0.6	0.6	0.5	0.4
Private Expend.a/	18.5	26.2	31.1	111.2	148.8	295.2	682.6	253.1
%	5.8	5.1	4.8	8.9	7.8	9.4	9.7	9.0
Total expenditure on education a/								
Nominal pesos	326	515	674	1,246	1,919	3,126	7,047	13,843
'81 const. pesos	326	320	220	255	251	235	221	213
Memo Items								
GDP nom. pesos	6,128	9,799	17,879	29,472	47,392	79,443	192,935	397,574
GDP '81 const. pesos	6,128	6,089	5,835	6,044	6,202	5,965	6,049	6,117

Sources: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control (SEP), *Oficios de los gobiernos de los estados*; *Estimación del gasto educativo municipal y particular.* de la Madrid, *Miguel, Primero y Cuarto Informes de Gobierno*, Presidencia de la República. Ministry of Programming and the Budget (SPP), *Cuenta de la Hacienda Pública Federal.*

a/ Figures refer to expenditure actually disbursed.
b/ Figures for 1985-1988 include transfer payments from Ministry of Programming to state governments.

Changes in the Structure of Expenditure

Between 1981-88, the structure of budgeted expenditure in education underwent a continuous process of change. Current spending on salaries, the acquisition of goods and services, and operations expenses represented 93 percent of total expenditure in education in 1981 and 94.9 percent in 1988. Investment spending in this sector dropped from 7 percent to 5.1 percent of total expenditure during the same period (Table 28).

TABLE 28: STRUCTURE OF EXPENDITURE BY EDUCATION SECTOR, 1981-88
(Billions of constant 1981 pesos)

	1981	1982	1983	1984	1985	1986	1987	1988
Real public expend. on edn.	220.5	229.1	159.5	169.5	174.3	158.6	157.8	155.7
of which:								
Current (%)	93.0	93.5	91.7	92.1	92.5	94.3	94.7	147.9
Investment (%)	7.0	6.5	8.3	7.9	7.5	5.7	5.3	5.1

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

The changes in the structure of spending were largely due to the need to pay increasing amounts in the form of salaries to professors and education workers, while at the same time increasing, in a modest fashion, enrolment in several levels of study (Table 29).

Reductions in investment precluded attempts to overcome the severe deficit of school facilities, including schoolrooms, laboratories and workshops. It has been estimated that in 1981 there was a deficit of 55,548 primary school units and 16,667 secondary school units. This deficit in installations increased to 60,000 primary school units in 1988 and 19,000 secondary school units in the same year.

Although the relative share of current expenditure increased over the period in question and approximately 90 percent of current expenditure goes to paying salaries, teachers' and workers' salaries at the individual level suffered significant declines in real terms. The severe loss in the buying power of their salaries adversely affected their standard of living, which forced many to seek additional sources of employment. This, in turn, had negative effects on productivity and probably caused a deterioration in the quality of education services offered.

TABLE 29: SELECTED MONTHLY SALARIES IN THE EDUCATION SECTOR IN MEXICO CITY, 1982 AND 1988
(Constant 1982 pesos)

Position	1982	1988	Variation
Preschool and primary teacher	17,154	8,178	-52.3
Secondary school teacher by hour-week-month	883	389	-53.3
Director, preschool and primary	20,556	10,033	-51.2
Director, secondary school	26,344	14,999	-43.1

Source: Ministry of Public Education, General Office for Budgetary Expenditures, *Catálogo de Empleos de la Federación.* Ministry of Public Education, Office of the Comptroller General, *Catálogo de Empleos de la Federación.*

Note: Monthly salaries for teachers in preschool and primary with university teaching degrees from the National Teachers' University received an 81% salary increase in 1987, a 64% increase in 1988, and for other categories of teachers with university degrees, an 83% salary increase was granted in 1987 and 92% in 1988. Figures for 1988 cited above refer to salaries in force on 13 January 1988.

The dramatic reduction observed in the real education budget (Table 30) had negative repercussions in practically every area and level of education, except vocational high school training, special education and preschool education. It is also important to consider that the area of vocational high school training received a mere 10 percent increase in its budget, in real terms, while experiencing a 100 percent increase in enrolment.

Among the areas experiencing the most pronounced budgetary reductions was the area of research in education (-94.4%), primary education (-49.3%) and adult education (-46.9%).

In Table 31 one may observe the dramatic reductions experienced during 1981-88 in cost per student. These cuts were due to budgetary restraints, coupled with rapid growth in enrolment at most levels. Reductions in per student expenditure occurred in virtually every area and level of education except for special education, vocational high school training and teachers' training at the high school level. In the case of special education, enrolment remained practically constant during the period under study. Vocational high school training registered a 47.2 percent accumulated increase in its budget,

TABLE 30: MINISTRY OF PUBLIC EDUCATION'S BUDGETED EXPENDITURE BY LEVEL OF EDUCATION, 1981-88
(Millions of constant 1981 pesos)

	1981	1982	1983	1984	1985	1986	1987	1988	% Change 1981-88
Initial education	554	589	515	631	1,586	588	523	495	-10.6
Special education	1,176	1,820	1,350	1,578	1,962	1,935	2,321	2,196	86.7
Preschool education	8,816	10,181	8,349	10,271	11,125	8,981	9,436	9,701	10.0
Primary education	75,084	75,437	43,778	45,457	43,492	39,021	40,185	38,096	-49.3
General secondary programme	20,957	21,037	14,599	16,121	17,259	14,275	15,803	15,612	-25.5
Technical secondary	16,257	13,666	9,796	11,545	12,391	9,586	10,731	10,757	-33.8
Vocational high school	1,555	2,365	2,141	4,773	4,466	4,813	4,535	4,404	183.2
Preparatory high school	11,856	12,175	9,412	7,325	8,630	8,309	7,377	9,085	-23.4
Technical high school	13,120	16,991	12,136	9,671	12,188	16,197	11,241	10,528	-19.8
Teachers' training	4,523	3,859	2,567	2,715	2,888	3,586	2,909	3,067	-32.2
Technological university a/	12,423	17,427	12,444	11,688	11,595	10,721	10,537	10,256	-17.4
General university prgm. a/	27,037	27,774	23,896	15,058	23,208	23,982	26,118	25,184	-6.8
Adult education programme b/	3,526	3,868	3,316	4,104	3,507	2,358	1,965	1,873	-46.9
Bilingual Indian programme	5,652	5,270	3,496	7,115	6,724	5,374	5,203	5,285	-6.5
Cultural & sports programmes	8,543	8,078	6,271	8,454	2,801	5,477	5,570	5,685	-33.4
Research in education & teaching materials	2,328	2,776	1,620	317	379	156	121	131	-94.4
Training programmes	1,590	1,546	1,363	1,619	1,342	1,191	1,378	1,531	-3.7
Others c/	5,469	4,245	2,436	1,102	2,761	2,099	1,890	1,814	-63.4
Total expenditure	220,466	229,091	159,487	169,547	174,304	158,621	157,844	156,698	-29.4

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

a/ Includes post-graduate programmes.
b/ Includes literacy and basic education programmes for adults.
c/ Includes programmes for individuals unable to enroll in normal programmes due to age, and other special programmes.

TABLE 31: EXPENDITURE PER STUDENT BY LEVEL OF EDUCATION, 1981-88
(Constant 1981 pesos)

	1981	1982	1983	1984	1985	1986	1987	1988	% Change 1981-88
Initial education	6,485	6,979	4,846	5,489	13,836	4,734	3,917	4,910	-24.3
Special education	14,409	16,037	10,679	10,967	12,176	10,058	15,262	13,040	14.3
Preschool education	10,493	9,124	6,376	7,025	6,844	5,258	5,400	5,518	-47.1
Primary education	7,240	7,172	4,100	4,289	4,150	3,774	3,964	3,808	-47.4
General secondary programme	12,806	11,884	7,746	8,281	8,402	6,902	7,678	7,684	-40.0
Technical secondary	25,608	19,251	11,977	13,412	13,291	9,803	10,667	10,384	-59.4
Vocational high school	13,773	13,819	11,519	28,276	24,581	21,466	10,210	20,274	47.2
Preparatory high school	21,098	19,638	13,275	9,563	10,151	9,674	8,429	10,098	-52.1
Technical high school	46,109	54,016	38,867	24,489	30,056	43,910	30,370	27,445	-40.5
Teacher training	66,596	64,286	45,737	68,440	81,149	130,447	118,377	110,738	66.3
Technological university a/	103,394	135,510	87,270	80,832	76,315	69,906	65,698	60,822	-41.2
General university prgm. a/	43,227	42,166	34,326	34,850	33,543	32,360	33,409	32,276	-25.3
Bilingual Indian programme	11,013	9,463	5,950	11,087	9,922	7,751	7,203	7,401	-36.0
Training programmes	32,783	29,951	23,255	18,464	15,300	12,154	13,854	14,197	-56.7

Source: Ministry of Public Education, General Office for Planning, Programming and Budgetary Control.

a/ Includes post-graduate programmes.

which was largely allocated towards the acquisition of equipment and installations which tend to be costly. Enrolment in teachers' training programmes at the high school level dropped significantly during the period under consideration, due mainly to the lack of growth in demand for teachers by the education sector. This explains the substantial increase in per student expenditure for this area, despite a real reduction in the area's budget over this period.

Among those areas experiencing the sharpest reductions in per student expenditure were technical secondary education (-59.4%), vocational training (-56.7%), general high school education (bachillerato) (-52.1%) and primary education (-47.1%). Although absorption rates for some levels of education declined during the period under consideration, total enrolment in the national education system rose. Increased demand for education services was met in many areas by restraining salaries, cutting or eliminating budgets for research programmes and projects for innovating construction techniques for school installations, as well as by restraining expenditure in other areas of support to education. These restrictive actions had adverse effects on the quality of education services being provided by the Mexican education system.

III. CONCLUSIONS

During recent years (1981-88), growth in coverage by the national education system lost momentum. In fact, in some areas of post-primary education, programme coverage actually dropped. This phenomenon may be largely explained by a lack of educational models capable of meeting new demands and stemming the still significant tide of school desertion, which has been further aggravated by the effects of economic crisis. The adverse trends have had the most pronounced effect on the neediest members of society.

This period also witnessed an increase in the number of illiterate adults in Mexico. The increase is explained, in part, by the ineffectiveness of the adult education programme and by certain structural flaws which have lessened the effectiveness of public actions designed to arrest any further increase in the number of adults lacking basic reading and writing skills.

A continuing problem is the striking disparities between different states of the republic in terms of the coverage and quality of education services. These disparities, which have constituted the main obstacle in providing equal access to education for the entire population, are

particularly acute for Indian populations and others inhabiting isolated rural areas of the country.

Mexico's education authorities responded to the adverse effects of the economic crisis by implementing a series of compensatory measures which were generally well-focused, but were characterized by low coverage. There was no global policy approach capable of coordinating and integrating compensatory measures within a viable framework. Intersectoral participation and cooperation on the part of international organisations were also lacking.

Policies aimed at improving the quality of education services had gained certain momentum by 1981. However, following the outbreak of the crisis, the subsequent reduction in per student expenditure in almost every area of education impeded further improvement in the quality of education. These severe budgetary restrictions were reflected in a significant drop in expenditure on education, expressed as a share of GDP, to levels below those recommended by UNESCO.

In the face of the economic crisis, education sector authorities proposed to rationalize the use of resources in order to achieve more with less. However, despite good intentions, several important activities such as research in education, the design and production of didactic materials, and the promotion of sports and cultural activities suffered serious budgetary cuts or were eliminated entirely. The construction of installations also suffered a serious retrogression. One of the most notorious results of this period was the reduction in investment in human capital.

The prolonged economic crisis and the subsequent application of adjustment policies in Mexico during the 1980s restricted education authorities' capacity to reduce inter-regional disparities in the coverage and quality of education services, improve salaries, satisfy unmet demand for adequate installations, incorporate advanced technologies and promote innovation and progress in the field of education.

BIBLIOGRAPHY

Avila Martinez, Angel *et al.* (1987), "Las raices estructuradas de la crisis económica actual en México", Facultad de economía (UNAM).

Banco Nacional de México (Banamex) (1987), "México Social". Mexico City.

Consejo Nacional de Población (CONAPO), "Pronósticos de Población para los grupos de edad relacionados con el Sistema Educativo" (República Mexicana). Mexico City.

Coordinación General del Plan Nacional de Zonas Deprimidas y Grupos Marginados (COPLAMAR), Necesidades Esenciales en México. "Situación Actual y Perspectivas al Año 2000 (Educación 2)". Mexico City: Editorial Siglo XXI.

de la Madrid, Miguel (1988), "Sexto Informe de Gobierno", Estadísticas.

_____ *Primero y Cuarto Informes de Gobierno* (First and Fourth State of the Union Addresses), Presidencia de la República.

Diario Oficial de la Federación (29 de Noviembre 1973), "Ley Federal de Educación".

Dirección de Evaluación de Políticas y Sistemas Educativos. "Avances Alcanzados por la Revolución Educativa que Instrumenta el Programa Nacional de Educación. Cultura, Recreación y Deporte (1984-1988)". Mexico City: Ministry of Public Education (SEP).

Dirección General de Planeación, Programación y Presupuesto (DGPP&P), "Evaluación de las acciones y el gasto en el sector Educativo (1982-1987)". Ministry of Public Education (SEP).

_____ "Costos de la Educación Particular". Ministry of Public Education (SEP).

_____ "Indicadores Educativos". Ministry of Public Education (SEP).

_____ "Informe de labores correspondientes al ciclo escolar 1981-1982". Ministry of Public Education (SEP).

_____ "Programa Nacional de Educación, Cultura, Recreación y Deporte 1989-1994". Ministry of Public Education (SEP).

Gaitán Cervantes, Mario G. and Pablo Vanscoit Martínez, "Financiamiento de la Educación Nacional", Dirección General de Planeación, Programación y Presupuesto. Ministry of Public Education (SEP).

Información Regular, de la Dirección General de Planeación, Programación y Presupuesto. Ministry of Public Education (SEP).

Instituto de Estudios Politicos, Económicos y Sociales (IEPES), "Aportaciones en Materia Educativa al Plan Nacional de Gobierno (1989-1994)".

_____ (1988), "Principales Características del Estado Actual de la Educación Mexicana".

Juárez Dávila, Francisco (1984). "La Estrategia Mexicana ante la crisis", Seminario de Planeación en tiempos de crisis.

Larroyo, Francisco, "Historia Comparada de la Educación en México". Mexico City: Editorial Porrúa.

López Portillo, José (1977), "Primer Informe de Gobierno".

Ministry of Programming and the Budget (SPP), *Cuenta de la Hacienda Pública Federal* (National Treasury Department Accounts).

Ministry of Public Education (SEP) (1987), "Avances del Sector Educativo".

_____ "Evaluación de Resultados del Programa Nacional de Educación, Cultura, Recreación y Deporte (1982-1988)".

_____ General Office for Budgetary Expenditures, *Catálogo de Empleos de la Federación* (Catalog of Government Jobs), Mexico 1976, 1979-81.

_____ General Office for Planning, Programming and Budgetary Control (DGPP&P) (SEP), *Oficios de los gobiernos de los estados*; *Estimación del gasto educativo municipal y particular* (Estimates of State, Municipal and Private Expenditure in Education).

_____ General Programming Office, *Oficios de los gobiernos de los estados* and *Estimación del gasto educativo municipal y particular* (Estimates of State, Municipal and Private Expenditure in Education).

_____ *Información Regular de la Dirección General de Planeación, Programación y Presupuesto.*

_____ "Memoria 1976/1982 (I Política Educativa)".

_____ Office of the Comptroller General, *Catálogo de Empleos de la Federación* (Catalog of Government Jobs), Mexico, 1976, 1979-81, 1982-88.

Muñoz Izquierdo, Carlos *et al.*, "Origen, Distribución y Eficiencia del Gasto Educativo en México", Cuaderno No. 4 Universidad Pedagógica Nacional.

National Institute for Adult Education.

Organización de las Naciones Unidas, Para La Educación, Ciencia y la Cultura (NESCO) (1987), "Informe de la Educación en México". Geneva.

_____ (1984), "Informe sobre la Educación en México, XXXIX", Conferencia Internacional de Educación". Geneva.

Poder Ejecutivo Federal, "Plan Nacional de Desarrollo 1989-1994".

Prawda Witenberg, Juan (1984), "Teoría y Praxis de la Planeación Educativa en México", Editorial Grijalbo.

_____ (1989), "Logros, Inequidades y Retos del Sistema Educativo Mexicano", Editorial Grijalbo.

Solana, Fernando (1981), "Historia de la Educación Pública en México", Fondo de Cultura Económica. Ministry of Public Education (SEP).

_____ (1982), "Tan lejos como llegue la Educación", Fondo de Cultura Económica.

Varios Autores, "México 75 años de Revolución (Desarrollo Social)", Fondo de Cultura Económica.

INNOCENTI OCCASIONAL PAPERS
ECONOMIC POLICY SERIES

EPS 1. *Economic Decline and Child Survival: The Plight of Latin America in the Eighties.* Teresa Albanez, Eduardo Bustelo, Giovanni Andrea Cornia and Eva Jespersen (March 1989).
Available in English and Spanish.

EPS 2. *Child Poverty and Deprivation in Industrialized Countries: Recent Trends and Policy Options.* Giovanni Andrea Cornia (March 1990).
Available in English, French and Spanish.

EPS 3. *Education, Skills and Industrial Development in the Structural Transformation of Africa.* Sanjaya Lall. Special Subseries: "Structural Adjustment in Sub-Saharan Africa". (July 1990).
Available in English.

EPS 4. *Rural Differentiation, Poverty and Agricultural Crisis in Sub-Saharan Africa: Toward An Appropriate Policy Response.* Giovanni Andrea Cornia and Richard Strickland. Special Subseries: "Structural Adjustment in Sub-Saharan Africa". (July 1990).
Available in English.

EPS 5. *Increased Aid Flows and Human Resource Development in Africa.* Paul Mosley. Special Subseries: "Structural Adjustment in Sub-Saharan Africa". (August 1990).
Available in English.

EPS 6. *Child Poverty and Deprivation in Italy: 1950 to the Present.* Chiara Saraceno. Special Subseries: "Child Poverty in Industrialized Countries". (September 1990).
Available in English.

EPS 7. *Toward Structural Transformation with a Human Focus: The Economic Programmes and Policies of Zambia in the 1980s.* Venkatesh Seshamani. Special Subseries: "Structural Adjustment in Sub-Saharan Africa". (October 1990).
Available in English.

EPS 8. *Child Poverty and Deprivation in the UK.* Jonathan Bradshaw. Special Subseries: "Child Poverty in Industrialized Countries". (October 1990).
Available in English.

EPS 9. *Adjustment Policies in Tanzania, 1981-1989: The Impact on Growth, Structure and Human Welfare.* Jumanne H. Wagao. Special Subseries: "Structural Adjustment in Sub-Saharan Africa". (October 1990).
Available in English.

EPS 10. *The Causes and Consequences of Child Poverty in the United States.* Sheldon Danziger and Jonathan Stern. Special Subseries: "Child Poverty in Industrialized Countries". (November 1990).
Available in English.

EPS 11. *The Fiscal System, Adjustment and the Poor.* Giovanni Andrea Cornia and Frances Stewart. Special Subseries: "Fiscal Policy and the Poor". (November 1990).
Available in English.

EPS 12. *The Health Sector and Social Policy Reform in the Philippines since 1985.* Wilfredo G. Nuqui. Special Subseries: "Fiscal Policy and the Poor". (January 1991).
Available in English.

EPS 13. *The Impact of Economic Crisis and Adjustment on Health Care in Mexico.* Carlos Cruz Rivero, Rafael Lozano Ascencio and Julio Querol Vinagre. Special Subseries: "Fiscal Policy and the Poor". (February 1991).
Available in English.

EPS 14. *Structural Adjustment, Growth and Welfare: The Case of Niger, 1982-1989.* Kiari Liman Tinguiri. Special Subseries: "Structural Adjustment in Sub-Saharan Africa". (March 1991).
Available in English.

EPS 15. *The Impact of Self-Imposed Adjustment: The Case of Burkina Faso, 1983-1989.* Kimseyinga Savadogo and Claude Wetta. Special Subseries: "Structural Adjustment in Sub-Saharan Africa". (April 1991).
Available in English.

EPS 16. *Liberalisation for Development: Zimbabwe's Adjustment without the Fund.* Robert Davies, David Sanders and Timothy Shaw. Special Subseries: "Structural Adjustment in Sub-Saharan Africa". (May 1991).
Available in English.

EPS 17. *Fiscal Shock, Wage Compression & Structural Reform: Mexican Adjustment & Educational Policy in the 1980s.* Fernando Valerio. Special Subseries: "Fiscal Policy and the Poor". (June 1991).
Available in English.

ISSN 1014-7837

unicef

International Child Development Centre

Piazza S.S. Annunziata, 12
50122 Florence, Italy
Tel. 3955-234-5258 - Fax 3955-244817
Telex 572297 UNICEF I

ISSN 1014-7837